

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for producing a coating or diffusion layer on a substrate for use in contact with a food product or beverage, said coating or diffusion layer preventing or inhibiting passage therethrough of flavour-active or taint compounds, and said method comprising applying to the surface of said substrate an effective amount of a reactive polymer, said reactive polymer being a polymeric material comprising first functional groups which react with at least one flavour-active or odour-active taint compound and second functional groups (which may be the same as or different from said first functional groups) which react with said substrate.
2. A method according to claim 1, wherein said substrate is a bottle closure, packaging or wrapping material, or a bottle or other container.
3. A method according to claim 1, wherein said substrate is a natural or synthetic cork, and said coating or diffusion layer prevents or inhibits passage of flavour-active or odour-active compounds from said cork to an alcoholic beverage in contact with said cork.
4. A method according to claim 1, wherein said flavour-active compounds are trichloroanisoles (TCA).

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5. A method according to claim 1, wherein said reactive polymer comprises functional groups which can interact by means of covalent bonding, hydrogen bonding, dipole-dipole interaction, polar interaction, ionic bonding, electrostatic forces or acid based interaction with flavour-active or odour-active compounds and/or with the substrate.
6. A method according to claim 1, wherein the reaction between the reactive polymer and the flavour-active or odour-active compounds or between the reactive polymer and the substrate entails covalent bonding or polar interaction.
7. A method according to claim 6, wherein said functional groups comprise hydroxyl groups.
8. A method according to claim 1, wherein said functional groups comprise polyethyleneglycol (PEG), amino, epoxy or methacryl groups.
9. A method according to claim 1, wherein the reaction between the reactive polymer and the flavour-active or odour-active compounds or between the reactive polymer and the substrate entails hydrogen bonding.
10. A method according to claim 1, wherein the reaction between the reactive polymer and the flavour-active or odour-active compounds or between the reactive polymer and the substrate entails an acid - base interaction.

11. A method according to claim 1, wherein said reactive polymer is a polyurethane or a copolymer or ionomer thereof, a terephthalate copolymer, polyethylene vinyl alcohol, a (vinylidene) copolymer, an epoxy polymer or copolymer, a polyamide or amide copolymer, a styrene acrylonitrile (SAN)/ acrylonitrile-butadiene-styrene (ABS) copolymer, poly (methacrylic acid) or a copolymer thereof, poly (methyl) methacrylate or a copolymer thereof, a Bisphenol copolymer, a Bisphenol A (BPA) - epichlorohydrin polymer, polyacetal, a polyvinylacetate (PVA) copolymer, a mono -, di - or poly - functionalised silane or a copolymer thereof, a mono -, di - or poly - functionalised siloxane or a copolymer thereof, or a functionalised or unfunctionalised polysilsesquioxane.

12. A method according to claim 11, wherein said reactive polymer is polyethylene vinyl alcohol, a polyurethane or a copolymer or ionomer thereof, or poly (methacrylic acid) or a copolymer thereof.

13. A method according to claim 11, wherein said reactive polymer is a mono -, di - or poly - functionalised silane, silane copolymer, siloxane or siloxane copolymer comprising polyethylene glycol (PEG), isoprene, butadiene, lactone, amino, terephthalate, amino acid, heterocyclic, hydride (SiH), thiol or epoxy functionalities.

14. A coated substrate produced according to the method of any one of claims 1 to 13.

15. A coated cork produced according to the method of any one of claims 1 to 13.

16. A method according to any one of claims 1 to 13, substantially as described herein and with reference to any one of Examples 1 to 10.

17. A coated substrate according to claim 14, substantially as described herein with reference to any one of Examples 1 to 10.

18. A coated cork according to claim 15, substantially as described herein with reference to any one of Examples 1 to 10.